



**MULTNOMAH COUNTY
AGENDA PLACEMENT REQUEST
BUDGET MODIFICATION**

(revised 08/02/10)

Board Clerk Use Only	
Meeting Date:	10/14/2010
Agenda Item #:	R-13
Est. Start Time:	11:05 am

BUDGET MODIFICATION: DCM-06

**Agenda Title: BUDGET MODIFICATION DCM-06 Hydrokinetic Energy Production (HEP)
Title: Grant Award.**

Note: For all other submissions (i.e. Notices of Intent, Ordinances, Resolutions, Orders or Proclamations) please use the APR short form.

Requested Meeting Date:	October 14, 2010	Amount of Time Needed:	10 Minutes
Department:	DCM	Division:	Facilities & Property Mgmt
Contact(s):	Clark Jurgemeyer		
Phone:	503 988-3074	Ext.:	
		I/O Address:	
Presenter Name(s) & Title(s):	John Lindenthal (CIP Manager), Clark Jurgemeyer (Energy Manager), John Muenchow (Project Manager)		

General Information

1. What action are you requesting from the Board?

Approval of bud mod DCM-06, adding \$150,000 of federal funding (HEP CP08.11.66) to the Capital Improvement Program to investigate the possibility of attaching mini-turbines to County-owed bridges across the Willamette River to generate electricity.

2. Please provide sufficient background information for the Board and the public to understand this issue. Please note which Program Offer this action affects and how it impacts the results.

In response to Board's climate change policies, FPM has continued to investigate possible efforts to conserve energy, improve efficiency, and develop renewable energy alternatives with respect to our building portfolio. In 2009, the County requested our lobbyist Holland & Knight to promote the feasibility study as federal earmark (which was passed and signed).

Hydrokinetic, (or free flow) generation captures energy from moving water without requiring a dam or diversion. While hydrokinetics includes generation from ocean tides, currents and waves; the most practical application in the near term may be in rivers and streams. River currents provide a more consistent and stable source of free energy than the sun or wind (24 hours a day, 7 days a week). Though the Willamette River has a low flow rate (compared to dam “heads”), placing turbines on bridge piers would take advantage of the "Venturi Effect" whereby fluids (water) increase speed around obstructions (piers). Hydro-electric equipment requires only routine maintenance, infrequent replacement, and no fuel costs. The underwater location also reduces exposure to most damage due to human factors or natural events.

The feasibility study would investigate the optimal size, number and placement of hydroelectric turbines (which would depend upon water depth, flow and navigation) and the resultant electrical power that may be generated. The study would determine how much electricity may be generated in excess of what is needed for bridge lighting (and in some cases for lifting). The study would compare the estimated cost of project development and likely Power Purchase Agreement to the forecast cost of a comparable amount of regular electricity purchased through regulated utilities over a similar time period. The study would also compare project costs (per kilowatt) to a comparable amount of “green power” purchased through regulated utilities or Renewable Energy Credit (REC) agreements.

Facilities & Property Management applied for and received a grant from the US Department of Energy (DOE) to pay for a feasibility study into the possibility of attaching mini-turbines to County-owned bridges across the Willamette River to generate electricity. The study would generally determine:

- a. Whether the concept is logistically feasible,
- b. Whether implementation would be economically feasible, and
- c. Who would be the best developer (e.g. County or third-party organization)

Required matching funds will be provided through in-kind work by County employees, such as the time spent to-date complying with preliminary federal contract requirements.

Due to the nature of this feasibility study the Department of Community Services (DCS) Transportation – Bridge Section has agreed to participate and take a project management role in the execution of the work. Facilities and Property Management will work closely with DCS.

3. Explain the fiscal impact (current year and ongoing)

The feasibility study is forecast to take about 12 months after contract signature, so it would occur in both FY11 and FY12. This is a one-time project not anticipated to exceed the \$150,000 awarded for it by the federal government.

The in-kind work by County employees is listed as \$66,380 in the Federal Contract.

4. Explain any legal and/or policy issues involved.

None.

5. Explain any citizen and/or other government participation that has or will take place.

None.

ATTACHMENT A

Budget Modification

If the request is a **Budget Modification**, please answer all of the following in detail:

- **What revenue is being changed and why? If the revenue is from a federal source, please list the Catalog of Federal Assistance Number (CFDA).**

The Capital Improvement Fund is increased by \$150,000 in federal funds from the US Department of Energy. The CFDA number for this award is 81.087
- **What budgets are increased/decreased?**

The Capital Improvement Fund professional services budget is increased by \$150,000 to pay for the study funded by this grant.
- **What do the changes accomplish?**

This study is expected to provide information about whether or not it is possible to generate electricity via turbines on County-owned bridges over the Willamette River.
- **Do any personnel actions result from this budget modification? Explain.**

None.
- **If a grant, is 100% of the central and department indirect recovered? If not, please explain why.**

Administrative expenses are expected to be minimal and will be absorbed in existing appropriations.
- **Is the revenue one-time-only in nature? Will the function be ongoing? What plans are in place to identify a sufficient ongoing funding stream?**

This is a one-time grant award for a one-time project. No additional funds are anticipated.
- **If a grant, what period does the grant cover? When the grant expires, what are funding plans? Are there any particular stipulations required by the grant (i.e. cash match, in kind match, reporting requirements etc)?**

The feasibility study is forecast to take about 12 months after contract signature, so it would occur in both FY11 and FY12. Required matching funds will be provided through in-kind work by County employees, such as the time spent to-date complying with preliminary federal contract requirements.

NOTE: If a Budget Modification or a Contingency Request attach a Budget Modification Expense & Revenues Worksheet and/or a Budget Modification Personnel Worksheet.

ATTACHMENT B

BUDGET MODIFICATION: DCM-06

Required Signatures

Elected Official or Department/ Agency Director: Approved by Karyne Kieta in Mindy's absence **Date:** 9/29/2010 at 1:07pm via email



Budget Analyst: Julie Neburka **Date:** _____

Department HR: _____ **Date:** _____

Countywide HR: _____ **Date:** _____